OBJECTIVES: Waste in prescribing, dispensing, and consumption of medications in community settings significantly impacts the US Health Care System. This research examines waste associated with the medication use process which consists of any written prescriptions that are not (1) taken to a pharmacy to be filled, (2) taken to be filled but abandoned at the pharmacy, or (3) result in a medication being dispensed but not consumed as directed. The aim of this study is to quantify the costs of medication waste in the United States exclusive of impact on health outcomes. **METHODS:** A review of published literature and data from the 2012 Medical Expenditure Panel Survey was used to quantify the number of prescriptions wasted at different stages of the medication prescribing and use process. Costs associated with medication waste included physician time and overhead lost writing prescriptions, pharmacist time and overhead lost filling prescriptions, and ingredient costs of medications not used. **RESULTS:** In 2012, more than 8 million prescriptions were either unfilled or abandoned, and 70 million resulted in dispensed medications that were not used. The total cost of this waste was estimated at more than $14 billion. This result excluded any additional costs associated with not achieving desired health outcomes. **CONCLUSIONS:** Patients who do not fulfill their role in the medication use process cause significant, avoidable costs to the health care system beyond the health outcomes not achieved.

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IMPACT OF POST-SURGICAL COMPLICATIONS ON HOSPITAL COSTS AND MARGINS

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OBJECTIVES: Patients undergoing major surgeries often experience post-surgical complications. The impact of post-surgical complications on hospital costs has been extensively studied but the impact on margins remains a subject of controversy. We assessed the financial consequences of postsurgical complications in high-risk US Medicare patients undergoing specific procedures. **METHODS:** Data from Medicare patients with ≥1 comorbidity who had major cardiac, vascular, gastro-intestinal and orthopedic surgical procedures in 2011 were identified in the CMS database. Post-surgical complications and financial information (in 2011 US$) were extracted from Medicare Standard Analytic Files and Hospital Cost Reports. Hospital margin was calculated as Medicare payments minus hospital costs. A total of 63 procedure codes (ICD-9-CM) were analyzed. **RESULTS:** Of 303,432 Medicare patients undergoing major surgery, mean costs were significantly higher for patients with at least one complication than for patients without any complication in each procedure category. For example, the mean cost per cardiac procedure patient with complication was $46,535, but only $32,887 per cardiac patient without complication. For each of the four procedure categories, average hospital margins were approximately $1,500-$2,500 higher for patients without than with complications: $1,508 for cardiac patients, $2,336 for gastro-intestinal, $1,694 for orthopedic, and $2,515 for vascular patients (all $p<0.0001$). Weighted average margin were the Medicare cases with complication to be converted into cases without complication would be $1,870 higher per case. For some procedure subgroups, the difference in average margin between cases with and without complications was even higher, such as in pancreatectomy ($3,907 per case), aorto-iliac & peripheral bypass ($3,614), resection of rectum ($2,602), and partial hepatectomy procedures ($2,303) (all $p<0.0001$). **CONCLUSIONS:** Postsurgical complications have a significant impact on hospital margins. Enhanced Recovery Programs have potential not only to improve quality of care but also to improve hospital margins.

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WITHDRAWN

PHP70

WHO IS SPENDING WHERE: ANALYSIS OF HEALTHCARE SPENDING BY MEDICAID AND PRIVATE PAYERS IN MASSACHUSETTS

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OBJECTIVES: Health care costs in Massachusetts (MA) are among the highest in the country. Thus, it is essential to gain an in-depth understanding of the patterns of healthcare resource utilization and expenditures in the state. This study examines healthcare spending in the state by care setting, and compares where most spending occurs for Medicaid and private payers. **METHODS:** We used the 2012 MA All Payer Claims Database, which included medical and pharmacy claims from all commercial payers and certain public programs (Medicare Part C only and Medicaid) to calculate healthcare utilization and expenditures for the state's population (N=6,549,289 individuals), including patient out-of-pocket payments. Traditional Medicare claims were not included in this analysis. We conducted descriptive analyses to calculate and compare total annual healthcare spending by site of service for Medicaid and private payers. **RESULTS:** Total healthcare spending for MA in 2012 amounted to $25 billion for private payers and $10.3 billion for the state Medicaid program. For private payers, pharmacy claims accounted for 27% of total healthcare spending, and the top sites of service by spending were hospital outpatient (26%), hospital inpatient (19%), and office visits (15%). For Medicaid, the biggest contributors to healthcare spending were office visits (22%), followed by hospital inpatient visits (17%), skilled nursing facility visits (16% versus only 0.3% for private), and home health visits (14% versus 1.5% in private), with pharmacy claims comprising 12% of spending. **CONCLUSIONS:** We identified differences in patterns of healthcare resource utilization and expenditures between Medicaid and private payers. These differences reflect demographic and pattern of care differences in the insured populations, as well as different payment policies and prices paid for services. In order to improve care quality, equity, and efficiency, it is important to understand how money is being spent by different segments of the healthcare market.

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PRODUCTIVITY GROWTH IN CALIFORNIA HOSPITALS FROM 2005 THROUGH 2011

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OBJECTIVES: The adaption of technological advances in the past decades underscores the importance of measuring how efficiently hospitals are utilizing the growing labor force to provide health services. Our study aimed to assess California hospital productivity growth through addressing the severity of patient's illness and outcomes of care. **METHODS:** We examined hospital productivity growth by analyzing patient discharge data from California for the period 2005 to 2011, among patient stays with a principal diagnosis of heart attack, pneumonia or heart failure. Productivity was defined by the ratio of the number of stays to total costs in each hospital-year. **RESULTS:** The study cohorts included 171,250 patient stays at 358 hospitals with a primary diagnosis of heart attack, 336,111 stays at 387 hospitals with pneumonia, and 389,413 stays at 383 hospitals with heart attack. Average costs per stay showed a slightly increasing trend from 2005 to 2011 (from $22,965 to $23,669 in heart-attack stays, from $10,956 to $12,238 in pneumonia stays, and from $13,279 to $14,144 in heart-failure stays, all in 2011 dollars). The average number of patient comorbidities increased by 37% for heart attack, 28% for pneumonia, and 87% for heart failure. A decreasing trend was observed in inpatient mortality rate, ranging from 26% for heart attack to 19% for pneumonia. Unadjusted annual productivity growth rates were significantly negative (-0.7% per year for heart-attack stays, -2.4% for pneumonia stays, and -1.5% for heart-failure stays). In contrast, after adjustment for patient severity of illness and inpatient survival, annual productivity growth rates became +0.4% per year for heart attack and +0.2% for heart failure; growth for pneumonia was no longer significantly negative. **CONCLUSIONS:** Accounting for patient severity and quality of care, as is appropriate, results in substantially more favorable trends in productivity growth at California hospitals.

PHP72

IMPACT OF THE SHIFT TO MEDICAID MANAGED CARE ON RESOURCE UTILIZATION AND COSTS FOR BENEFICIARIES IN MISSISSIPPI MEDICAID

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OBJECTIVES: As have many states, Mississippi Medicaid has witnessed a major shift from fee-for-service to managed care with in the last few years. In November 2012, managed care enrollment was increased to almost 30% with the aim of improving health care service quality and reducing costs. However, the effects of this shift of patients to managed care has not been thoroughly evaluated. This project aimed to evaluate the impact of the shift of patients from fee-for-service to managed care on health care utilization, quality and costs. **METHODS:** A retrospective analysis was conducted using Mississippi Medicaid FFS administrative claims and beneficiary eligibility data for the period November 1, 2011 through December 31, 2013. A cohort of beneficiaries were identified who were continuously enrolled for this period and spent the first 12 months enrolled in fee-for-service and the next 12 months in managed care. Various outcomes were measured for the first 12-month and the second 12-month periods. An additional cohort of beneficiaries who were enrolled in fee-for-service for the whole duration of the study period were also followed on the same measures as a control group. **RESULTS:** The number of medications filled, number of office visits, intensity of office visits, total pharmacy costs and total outpatients costs were found to increase after the shift to managed care. Days of inpatient stay, inpatient costs and ER costs all decreased. It appears that the shift to managed care has caused an increase in outpatient and pharmacy utilization and costs and a decrease in inpatient costs. **CONCLUSIONS:** The shift to managed care seems to have a mixed effect on health care use and spending for Mississippi Medicaid beneficiaries. Increased use of outpatient services while inpatient costs decrease may indicate a more appropriate level of care being used. Further analysis is needed to provide conclusive results.